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SUGGESTED RETAIL

CDR700 & CDR500 REPEATER HOUSINGS

CDR Repeater Housings:
- CDR700 (Desktop Mount)
- CDR500 (Wall Mount)

Each CDR700/CDR500 Housing Includes:
- Power Supply
- Fan Kit
- Repeater Interface Cables
- Service Manual
- 2 Year Warranty

CDR700

CDR500

Notes:
1. Each repeater housing utlizes two (2) CDM Series mobiles.
2. All CDM Series LowBand, VHF & UHF models are compatible.
3. FCC Frequency Stability requirements for repeater applications have been met for UHF 450-512 MHz operating at 12.5 kHz channel spacing. See the Mobile price pages for new CDM750, CDM1250 & CDM1550 models.

MODEL NUMBER	DESCRIPTION	MSRP
CDR500/700 Repeater Housing		
	Select One (1) CDR Repeater Housing. These housings are compatible only with CDM Series Mobiles. *NOTE: HKKN4000 Power Sense Cable: In the event of a power loss, this cable will allow the repeater to power up automatically once A/C is restored.*	
HKLN4056	CDR700 Desktop Repeater Housing **This housing contains one controller slot which accommodates 7" wide repeater controllers.*	$666.00
HKLN4060	CDR500 Wall Mount Repeater Housing **This housing contains one controller slot which accommodates 7" wide repeater controllers.*	$799.00
Purchase Separately - Required		
	Select Two (2) CDM Series Mobiles - See CDM Series price pages for model availability and pricing - Any two (2) CDM LowBand, VHF or UHF models can be utilized.	
	Select Repeater Controller(s)	
HLN3948	**Basic Interface Repeater Controller -** Provides repeater functionality, remote knock-down/set-up, in/crossband and uni/bi directional capabilities. "B" version includes a mounting shroud which is required for proper installation within the CDR700 repeater housing.	$288.00
HLN9119	**ZR340 Advanced Interconnect Controller -** Provides advanced interconnect capabilities including password driven access and disconnect codes, customized toll restrict and toll restrict bypass. Does not use RSS. Programming done via DTMF parameters.	$803.25

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CDR700 & CDR500
REPEATER HOUSINGS
ACCESSORIES

MODEL NUMBER	DESCRIPTION	MSRP
Duplexer Accessories:		
All duplexers have female type "N" connectors.		
Select One (1) Tuned Duplexer (5 Days ARO) - Specify frequency for tuning.		
HFD8465	VHF Duplexer, 150-160 MHz (requires Internal Duplexer & Antenna Cable Kit - minimum & maximum freq. separation is 4.5 MHz/6 MHz)	$611.00
	Note: To order this Duplexer TUNED, call Dealer Support Services to place your order at 800-927-2744, Prompt 1, 1.	
	OR	
Select One (1) Untuned Duplexer - Requires tuning in the field.		
VHF - Duplexers		
HFD8188	VHF Duplexer, 144-155 MHz (minimum & maximum freq. separation 4.5 MHz/6 MHz)	$433.00
HFD8189	VHF Duplexer, 155-162 MHz (minimum & maximum freq. separation 4.5 MHz/6 MHz)	$486.00
HFD8190	VHF Duplexer, 162-174 MHz (minimum & maximum freq. separation 4.5 MHz/6 MHz)	$478.00
UHF - Duplexers		
HFE8400	UHF Duplexer, 406-450 MHz (minimum & maximum freq. separation 5 MHz)	$390.00
HFE8401	UHF Duplexer, 470-490 MHz (minimum & maximum freq. separation 3 MHz)	$438.00
(Only required if using a Duplexer)		
HKKN4002	CDR700 & CDR500 Internal Duplexer & Antenna Cable	$85.00
HKKN4001	CDR700 & CDR500 External Duplexer & Antenna Cable - required when using separate transmit and receive antennas or duplexers that do not fit into CDR500 & CDR700 housings.	$80.00
Antenna Accessories:		
RDD4527	VHF 3dB Gain Antenna, 150-158 MHz	$361.00
RDE4556	UHF 3.8dB Gain Antenna, 450-470 MHz	$421.00
Contact RPSD for additional antennas.		
Mounting Accessories:		
HLN9169	CDR500 & GR500 Wall & 19" Panel Mount	$100.00
HKLN4117	CDR500 Radio & Duplexer Mounting Bracket Retrofit Kit - This bracket allows the installation of CDM Series mobiles within a GR500 repeater housing.	$110.00
General Accessories:		
HLN9455	CDR700, GR1225, RKR1225 & GR400 X-Pand Battery Revert & Float Maintenance Charger	$155.00
HPN9033	CDR700, GR1225 & RKR1225 Power Supply	$201.60
HPN9005	CDR500 & GR500 Power Supply	$492.00
AARMN4026	Enhanced Keypad Microphone (Supports Remote Monitor)	$99.00
RMN5068	Desk Microphone, Black	$120.00
HKKN4000	Power Sense Cable - in the event of a power loss, this cable will allow the repeater to power up automatically once A/C is restored	$25.00
HLN9457	Hardware Kit for use with the Expanded Accessory Connector (includes 16 connector pins, five (5) 8" wires with pins attached and an extra housing)	$6.95
6864110R66	CDR700 & CDR500 Service Manual	$15.00
Preselectors:		
- To order these Preselectors TUNED, call Dealer Support Services to place your order at 800-927-2744, Prompt 1, 1.		
- To order these Preselectors UN-TUNED, order directly through RPSD.		
- The CDR700 allows for the internal installation of either a duplexer or a preselector.		
- The CDR500 allows for internal mounting of a duplexer and a preselector.		
- All preselectors have female type "N" connector. A dealer supplied type "N" male to male connector is required for proper operation. The length of the cable depends on your application. Call Motorola RPSD Parts ID at 800-422-4210 to find a cable for your individual application or for additional preselector options.		
HFD8461	VHF Preselector, 144-160 MHz	$336.00
HFD8462	VHF Preselector, 160-174 MHz	$336.00
HFE8459	UHF Preselector, 440-474 MHz	$450.00
Lightning Protection Recommendation Accessories:		
Phone/Remote Line Suppressors:		
RRX4021	Single Line Suppressor	$50.00
Coaxial Cable In-Line Arrestors:		
DSISB50LNC2	Coax Protector. *Available to order via MOL only*	$66.00
RRX4032	Tower Mounting Hardware for Lightning Arrestor	$15.00
Desktop Controllers and Remote Adapters:		
See Desktop Controllers and Remote Adapters for pricing and ordering information within this section.		

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SUGGESTED RETAIL

REPEATER INTERFACE COMMUNICATIONS KIT™

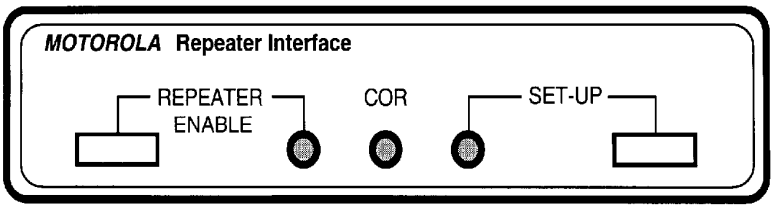
The Repeater Interface Communications Kit Model Includes:

- For use with CDM750, CDM1250 & CDM1550
- Selectable Hang Time
- PL, DPL, CSQ
- Uni-Directional or Bi-Directional Repeater Operation
- Singleband and Crossband Operation
- Transparent Operation
- Remote Repeater Set-Up and Knock Down
- LED Indicators for Repeater Enable, COR and Repeater Set-Up
- Front Panel Control for Repeater Enable and Set-Up
- Interface Box, Mounting Bracket and all required Cables

MODEL	DESCRIPTION	MSRP
HLN3333	Repeater Interface Communications Kit (includes manual)	329.00

General Accessories:		
HKN9019	16 Pin Conductor Cable - same as HKN9969 (3 Ft. long enhanced connectors)	14.44
HKN9969_R	Accessory for Repeater Interface Communications Kit - additional 16 conductor cable (3 Ft. long) for connection to other accessories.	35.50

Manuals:		
6880901Z79-B	R.I.C.K. Service & Programming Manual (most current issue includes MMR-062)	5.67



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SUGGESTED RETAIL

BATTERY REVERTING CHARGER FOR USE WITH MOTOROLA MTR2000 BASE STATIONS

These battery reverting charger units charge and maintain the radio battery bank in a float type application. The system provides automatic reverting to a battery bank when main AC power fails and also provides separate charging capability.

BASIC PACKAGE INCLUDES:

- Auto Transfer Circuit
- Low Voltage Disconnect
- Stand Alone Box
- Auto Equalize
- Battery "On" Indicator
- Overvoltage Protection & Indicator
- Float and Automatic Equalize Circuitry
- Output Current Indicator
- Temperature Compensation Capability (optional)
- Charger Failure Indicator
- Rack Mountable

MODEL	DESCRIPTION	MSRP
L1883	Battery Reverting Charger, 14-volt (12-volt nominal) (for 30 Watt, 40 Watt and Receive Only models)	$1,619.00
L1884	Battery Reverting Charger, 28-volt (24-volt nominal) 25-100 Watt	$1,619.00

Periferals:		
CDN6226A	Cable Interface, Station to Charger	$66.15
CDN6227A	Cable Interface, Battery to Charger	$85.70
TDN9879A	Temperature Sensor	$40.00

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SUGGESTED RETAIL

GTR 8000

GTR 8000 ANALOG CONVENTIONAL BASE RADIO

GENERAL INFORMATION

The GTR 8000 Base Radio, orderable model T7039 is a future ready base radio that offers high reliability, future expandability, and excellent coverage. The GTR 8000 Base Radio deployed as an analog conventional repeater can be upgraded to simulcast, digital, trunking and other configurations including P25 TDMA with software upgrades only (no hardware changes). Its high performing analog capabilities enable narrow-banding migrations that maximize audio performance. With its compact design and superior hardware, the GTR 8000 surpasses the bar previously set by QUANTAR.

GENERAL INFORMATION:

High Powered Performance

- 100 ppb frequency stability directly enhances analog audio performance
- Supports optional analog features including sumulcast, repeater access setup/knockdown, scanning receiver, multi-PL, and WildCard with GPIO (General Purpose Inputs/Outputs)
- Optional preselector achieves 95dB spurious and image response rejection to block out transmitters at crowded sites
- Standard -48V battery revert and charging capability eliminates the need for an uninterruptible power supply (UPS) in many installations

Installation & serviceability

- Compact hardware utilizes a 3 rack unit chassis
- Ships factory aligned ready for installation
- Hot Swap hardware enables service and hardware replacement without system down-time
- Software download can be managed while online and fully operational
- All servicing can be performed from the front of the station
- High-reliability fans are rated for 10 years of continuous use, will alarm 7 days prior to failure, decreasing maintenance costs and minimizing downtime

RESOURCES:

- GTR 8000 Base Radio Manual - https://motonline.mot-solutions.com/Member/ContentManagement/resourcecenter.asp
- 6871023P25-A Quick Guide for Replacing a Conventional QUANTAR with a GTR 8000 Base Radio - https://motonline.mot-solutions.com/Member/ContentManagement/resourcecenter.asp

ORDERING REQUIREMENTS:

NOTE: All stations on a Simulcast channel should be of the same station type.

1. Main Model

The following main model must be ordered for a GTR 8000 Base Radio.

T7039A GTR 8000 BASE RADIO

Ordering Note: *Only order a quantity of one of the T7039A per line item. This model number will automatically generate internally added options for all hardware components that are not part of an orderable option (such as cabling).*

2. Frequency Band and Power Level

Enter the Frequency Band option:

CA00855AA ADD : 700/800 MHZ MID POWER

X640AL ADD : UHF R2 MID POWER (435-524)

X530BG ADD : VHF MID POWER (136-174)

X448AA ADD : UHF R1 MID POWER (380-435)

Ordering Note: *One TX and one RX frequency must be specified and will be collected at the main model level. When ordering analog conventional software (option CA01949AA), TX and RX frequencies can be equal when the antenna relay option CA01504AA is ordered.*

700/800 MHz: Frequency Rules for CA00855AA

RX Range: 794.00625 - 824.99375 MHz.

TX Range: 764.00625 - 775.99375 MHz and 851.00625 - 869.99375 MHz

* If Freq (TX) is 764.00625 - 775.99375 MHz, then Freq (Rx) = TX + 30

* If Freq (TX) is 851.00625 - 869.99375 MHz, then Freq (Rx) = TX – 45

* All frequencies must be divisible by 2.5 or 3.125 kHz.

Note: *Currently, 796.09375, 806.88125, 808.31875, and 822.375 are not supported for Rx.*

UHF R2: Frequency Rules for X640AL

RX Range: 435.0000-524.0000 MHz.

TX Range: 435.0000-524.0000 MHz

* If Freq (TX) is 435-524 MHz, then Freq (Rx) $\geq \pm$ .25 MHz TX

* All frequencies must be divisible by 2.5 or 3.125 kHz.

Note: *Currently, 454.500, 474.6375, 494.05625, and 511.3125 are not supported for Rx.*

UHF R1: Frequency Rules for X448AA

RX Range: 380.0000 – 435.0000 MHz.

TX Range: 380.0000 – 435.0000 MHz

* If Freq (TX) is 380-435 MHz, then Freq (Rx) $\geq \pm$ .25 MHz TX

* All frequencies must be divisible by 2.5 or 3.125 kHz.

Note: *Currently, 380.250 and 416.925 MHz are not supported for Rx.*

VHF: Frequency Rules for X530BG
RX Range: 136.0000 – 174.0000 MHz.
TX Range: 136.0000 – 174.0000 MHz
* If Freq (TX) is 136 - 174 MHz, then Freq (Rx) ≥ + .25 MHz TX
* All frequencies must be divisible by 2.5 or 3.125 kHz.

150W High Power 800MHz PA
CA02478AA ADD: 800MHZ 150W HI POWER
- CA02478AA provides high power transmission in the 800MHz frequency. It's compatible with anolog simulcast & non-simulcast.

3. Base Radio Software
CA01949AA ADD: ANALOG CONVENTIONAL SOFTWARE
- CA01949AA provides a circuit analog conventional base radio. This base radio software supports 2wire, 4wire, and 8wire circuit analog wireline links. 16 programmable channel personalities. Each channel personality can be configured for base station, repeater, simplex, or receive only operation. TRC wireline keying is supported, with a full complement of programmable function tones. The CSS (Configuration Service Software) install disc is included with this option.

4. Energy Efficiency Options
CA01953AA ADD : POWER EFFICIENCY PACKAGE
- This optional feature provides hardware and software for reduced power consumption to accommodate needs at sites without grid power or that are driven off alternative energy sources.
* Only available with UHF R2 (X640AL), UHF R1 (X448AA), & VHF (X530BG).

5. Conventional Software System Configuration
Choose the appropriate optional conventional software system configuration if required.
CA01952AA ADD: ANALOG CONVENTIONAL SIMULCAST SOFTWARE
- CA01952AA provides the analog conventional base radio with the Gen Tx Data and E&M keying interface to a DSM channel bank card. The base radio must be provided with a 5MHZ/1PPS composite reference to ensure the timing and signal integrity required for analog simulcast. The GTR 8000 base radio cannot be mixed with QUANTAR analog simulcast stations on the same simulcast channel/frequency.
CA01951AA ADD: ANALOG CONVENTIONAL VOTING SOFTWARE
- CA01951AA supports analog transmit and receive operation when connected to SpectraTAC, DIGITAC, and other TRC comparators in a voting channel configuration.

6. Conventional Features
Choose the appropriate optional system feature options if required.
CA01504AA ADD : ANTENNA RELAY
- CA01504AA required for base stations with a single antenna and allows one antenna to be used for both transmit and receive signals.
CA01503AA ADD : FALL BACK IN CABINET REPEAT- SIMULCAST
- CA01503AA enables the station to continue to receive and transmit when communication with the comparator is lost.
CA01947AA ADD: RECEIVER SCAN OPERATION
- CA01947AA provides the ability to scan for qualified activity on up to 16 receive frequencies. The receive frequencies are assigned in the 16 programmable channel personalities. Scan operation can be suspended and resumed by TRC WildCard progamming.
CA01950AA ADD: CONV MULTI-NAC MULTI-PL
- CA01950AA enables multiple PL tones (analog) or multiple NACs (digital P25 Network Access Codes) to be detected on a single channel. Each of the 16 channel personalities can be configured with a list of PL tones and NACs to use for receiver qualifiers.
CA01954AA ADD: WILDCARD w/GPIO
- CA01954AA provides configurable inputs and outputs with a programmable set of event/action tables for implementing custom base radio interface applications.
CA01955AA ADD: MAIN/STANDBY OPERATION
- CA01955AA provides WildCard programming presets and cabling for a side-by-side base radio main/standby configuration.

7. Peripherals
7.1 Tx Filters and Duplexers: Tx Filters are not compatible with Duplexers. In circuit or IP simulcast configurations the PMU on the TX filters are not functional.
* 700/800 MHz: If the customer frequencies are in the 700 MHz frequency range (Tx: 764.00625 - 775.99375 MHz), the customer must order X182BW or CA00882AA per FCC licensing rules. If the customer frequencies are in the 800 MHz frequency range (Tx: 851.00625 - 869.99375 MHz), the following peripherals are optional.
* UHF (R1 380-435 MHz, R2 435-524 MHz): The following peripherals are optional.
* VHF (136-174 MHz): The following peripherals are optional. TX and RX frequencies must be at least 1.5 MHz apart if peripherals are desired.

X182BW ADD : DUPLEXER, 700 MHZ
- X182BW provides the option of using the same antenna for receive and transmit in the 700 MHz standalone base radio configuration. This option provides the filtering required by the FCC for 700 MHz.
X182BX ADD : DUPLEXER, 800 MHZ
- X182BX provides the option of using the same antenna for receive and transmit in the 800 MHz standalone base radio configuration.

7. Peripherals (continued)

X182BZ ADD : DUPLEXER, UHF 380-512 MHz

- X182BZ provides the option of using the same antenna for receive and transmit in the UHF standalone base radio configuration. If the X182BZ is ordered, X265AP (ADD: NARROW PRESELECTOR, 380-512 MHz) is required. The transmit frequencies must fall within one of the following subbands: 380-403, 403-435, 435-470, 470-494, and 494-512 MHz. Also, above 470 MHz, the Tx and Rx frequency separation should be at least 3.0 MHz for best performance. Below 470 MHz, the Tx and Rx frequency separation should be at least 5.0 MHz for best performance.

X182CC ADD : DUPLEXER 136-146 MHZ

- X182CC provides the option of using the same antenna for receive and transmit in the VHF (136-146 MHz) standalone base radio configuration. If the X182CC is ordered, the X265AN (ADD: NARROW PRESELECTOR, 136-154) is required. The Tx and Rx frequency separation must be at least 1.5 MHz for best performance.

X182CB ADD : DUPLEXER 144-160 MHZ

- X182CB provides the option of using the same antenna for receive and transmit in the VHF (144-160 MHz) standalone base radio configuration. If the X182CB is ordered, the X265AN (ADD: NARROW PRESELECTOR, 136-154) or X265AM (ADD: NARROW PRESELECTOR, 150-174) are required. The Tx and Rx frequency separation must be at least 1.5 MHz for best performance.

X182CA ADD : DUPLEXER 158-174 MHZ

- X182CA provides the option of using the same antenna for receive and transmit in the VHF (158-174 MHz) standalone base radio configuration. If the X182CA is ordered, the X265AM (ADD: NARROW PRESELECTOR, 150-174) is required. The Tx and Rx frequency separation must be at least 1.5 MHz for best performance.

CA00882AA ADD : 700 MHz TX FILTER w/PMU

- CA00882AA provides the TX filtering of up to 12 combined 700 MHz transmitters. The Tx filter can be added after the cavity combiner.

CA00883AA ADD : 800 MHz TX FILTER w/PMU

- CA00883AA provides the required TX filtering of up to 12 combined 800 MHz transmitters. The Tx filter can be added after the cavity combiner.

7.2 Narrow Preselector: The Base Radio Preselector rejects unwanted signals including the transmitter signals from overloading the receiver.

* If TIA102-CAAB Class A spurious response rejection (90 dB) specification is required, the Base Radio Preselector must be ordered. The Narrow Preselector is optional.

* If a Duplexer is to be ordered also, a Narrow Preselector is required for UHF (X448AA or X640AL) or VHF (X530BG) systems.

X265AJ ADD : BASE RADIO PRESELECTOR, 700 MHz

- X265AJ provides RX filtering in the 700 MHz standalone base radio configuration and is attached to the back side of the base radio.

X265AH ADD : BASE RADIO PRESELECTOR, 800 MHz

- X265AH provides RX filtering in the 800 MHz standalone base radio configuration and is attached to the back side of the base radio.

X265AN ADD : BASE RADIO PRESELECTOR, (136 – 154 MHZ)

- X265AN provides RX filtering in the VHF subband 136 - 154 MHz for the standalone base radio configuration and is attached to the back side of the base radio. When ordering this option, the frequency separation between the highest Rx frequency and the lowest Rx frequency can be no more than 4 MHz.

X265AM ADD : BASE RADIO PRESELECTOR, (150 – 174 MHZ)

- X265AM provides RX filtering in the VHF subband 150 – 174 MHz for the standalone base radio configuration and is attached to the back side of the base radio. When ordering this option, the frequency separation between the highest Rx frequency and the lowest Rx frequency can be no more than 4 MHz.

X265AP ADD : BASE RADIO PRESELECTOR, (380 – 512 MHZ)

- X265AP provides RX filtering in the UHF subband 380-512 MHz for the standalone base radio configuration and is attached to the back side of the base radio. When ordering this option, the frequency separation between the highest Rx frequency and the lowest Rx frequency can be no more than 4 MHz.

7.3 Dual Circulator: If an external dual circulator is needed, order quantity one of X676BF, X676BG, X676BJ, X676BI or X676BH based on the frequency of the system.

*** NOTE:** The dual circulator is not compatible when the base radio ordered is using Linear Simulcast Modulation (LSM) in the UHF (X640AL or X448AA) or the VHF frequency band (X530BG).

X676BF ADD : 700/800 MHZ EXTERNAL DUAL CIRCULATOR

- X676BF adds 2 circulators and a low pass filter that are mounted on a 2 rack unit tray for the 700/800 MHz band. Since the power amplifier has one circulator, this option brings the total number of circulators to three.

X676BG ADD : UHF EXTERNAL DUAL CIRCULATOR (380-512 MHZ)

- X676BG adds 2 circulators and a low pass filter that are mounted on a 2 rack unit tray for the UHF band (380 – 524 MHz). Since the power amplifier has one circulator, this option brings the total number of circulators to three. All Tx frequencies must fall within one of the following subbands: 380-403, 403-470, or

X676BJ ADD : EXT DUAL CIRCULATOR, 136 – 146 MHZ

- X676BJ adds 2 circulators and a low pass filter that are mounted on a 2 rack unit tray for the VHF band (136 – 146 MHz). Since the power amplifier has one circulator, this option brings the total number of circulators to three.

X676BI ADD : EXT DUAL CIRCULATOR, 144 – 160 MHZ

- X676BI adds 2 circulators and a low pass filter that are mounted on a 2 rack unit tray for the VHF band (144 – 160 MHz). Since the power amplifier has one circulator, this option brings the total number of circulators to three.

X676BH ADD : EXT DUAL CIRCULATOR, 158 – 174 MHZ

- X676BH adds 2 circulators and a low pass filter that are mounted on a 2 rack unit tray for the VHF band (158 – 174 MHz). Since the power amplifier has one circulator, this option brings the total number of circulators to three.

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SUGGESTED RETAIL

GTR 8000

GTR 8000 ANALOG CONVENTIONAL BASE RADIO

GENERAL INFORMATION

7. Peripherals (continued)

7.4 Optional Conventional Hardware Kits

The following kits provide add-on hardware (including associated cables and fasteners) with installation instructions for specialized Conventional base radio solutions.

CA01958AA ADD: T2-2R RECEIVER MUTE
CA01959AA ADD: T3-3R RECEIVER MUTE
CA01960AA ADD: T4-4R RECEIVER MUTE
CA01961AA ADD: RCVR SOFT NO SPLITTER
CA01957AA ADD: T1-2R W/ TALKAROUND
CA01962AA ADD: T2-2R DUPLEXER & TRPL RELAY

8. Cables

CA01400AA ADD : POWER CABLE, DC

- A 12 foot AC power cable will come standard with the base radio. If a DC power cable is required, order option CA01400AA and a DC cable will be shipped in addition to the AC cable.
- A Battery Temperature Sensor and a 40 foot long cable are included when CA01400AA option is ordered.

CA00975AA ADD : BATTERY TEMPERATURE SENSOR EXTENSION CABLE

- The CA00975AA option offers an extension cable that provides a 50 foot extension. Up to 3 extensions can be ordered.

9. Rack Mount Hardware

Choose rack mount hardware, if required.

X153AW ADD : RACK MOUNT HARDWARE

- X153AW provides rack mount hardware for the base radio as well as any associated optional/peripheral equipment. It should be selected if the base radio will be installed in standard 19-inch relay racks or if it is being installed into an existing Quantar rack.

Model Number	Description	MSRP
	Models:	
T7039	GTR 8000 BASE RADIO	$6,000.00
	Options:	
Frequency Band:		
CA00855AA	ADD: 700/800 MHZ	$6,300.00
X640AL	ADD: UHF R2 (435-524 MHZ)	$6,300.00
X530BG	ADD: VHF (136-174 MHZ)	$6,300.00
X448AA	ADD: UHF R1 (380-435 MHZ)	$6,300.00
150W High Power 800MHz PA		
CA02478AA	ADD: 800MHZ 150W HI POWER	$12,500.00
Base Radio Software:		
CA01949AA	ADD: ANALOG CONVENTIONAL SOFTWARE	N/C
Energy Efficiency :		
CA01953AA	ADD: POWER EFFICIENCY PACKAGE	$500.00
Conventional Software System Configuration:		
CA01952AA	ADD: ANALOG CONVENTIONAL SIMULCAST SOFTWARE	N/C
CA01951AA	ADD: ANALOG CONVENTIONAL VOTING SOFTWARE	N/C
Conventional Features:		
CA01504AA	ADD: ANTENNA RELAY	$350.00
CA01503AA	ADD: FALL BACK IN SIMULCAST CABINET REPEAT	$600.00
CA01947AA	ADD: RECEIVER SCAN OPERATION	$400.00
CA01950AA	ADD: CONVENTIONAL MULTI-NAC MULTI-PL	$500.00
CA01954AA	ADD: WILDCARD W/GPIO	$1,200.00
CA01955AA	ADD: MAIN/STANDBY OPERATION	$450.00
Peripherals:		
X182BW	ADD: DUPLEXER, 700 MHZ	$1,380.00
X182BX	ADD: DUPLEXER, 800 MHZ	$1,380.00
X182BZ	ADD: DUPLEXER, UHF	$1,380.00
X182CC	ADD: DUPLEXER, 136-146 MHZ), THEN TX AND RX MUST BE 136-146	$1,380.00
X182CB	ADD: DUPLEXER, 144-160 MHZ), THEN TX AND RX MUST BE 144-160	$1,380.00
X182CA	ADD: DUPLEXER, 158-174 MHZ	$1,380.00
CA00882AA	ADD: 700 MHZ TX FILTER W/PMU	$1,000.00
CA00883AA	ADD: 800 MHZ TX FILTER W/PMU	$1,000.00
X265AJ	ADD: BASE RADIO PRESELECTOR, 700 MHZ	$500.00
X265AH	ADD: BR PRESELECTOR, 800 MHZ	$500.00

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GTR 8000

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GTR 8000 ANALOG CONVENTIONAL BASE RADIO

SUGGESTED RETAIL

GENERAL INFORMATION

Model Number	Description	MSRP
Peripherals (continued):		
X265AN	ADD: NARROW PRESELCTOR, 136-154 MHZ	$500.00
X265AM	BR PRESELCTOR, 150-174 MHZ	$500.00
X265AP	ADD: BR PRESELECTOR 380-512 MHZ	$500.00
X676BF	ADD: 700/800 MHZ EXTERNAL DUAL CIRCULATOR	$1,000.00
X676BG	UHF EXTERNAL DUAL CIRCULATOR (435-494 MHZ)	$1,500.00
X676BJ	ADD: EXT DUAL CIRCULATOR, 136-146 MHZ	$1,500.00
X676BI	ADD: EXT DUAL CIRCULATOR, 144-160 MHZ	$1,500.00
X676BH	ADD: EXT DUAL CIRCULATOR, 158-174 MHZ	$1,500.00
Conventional Hardware:		
CA01958AA	T2-2R RECEIVER MUTE	$2,000.00
CA01959AA	T3-3R RECEIVE MUTE	$2,000.00
CA01960AA	T4-4R RECEIVER MUTE	$2,000.00
CA01961AA	RCVR SOFT NO SPLITTER	$400.00
CA01957AA	T1-2R W/TALKAROUND	$1,200.00
CA01962AA	T2-2R DUPLXR &TRPL RELAY	$4,000.00
Cables:		
CA01400AA	ADD: POWER CABLE, DC	N/C
Rack Mount Hardware:		
X153AW	ADD: RACK MOUNT HARDWARE	$50.00

Replacement Parts:

Nomenclature	Description	MSRP
DLN6895	FRU: PA 7/800 MHz	$1,200.00
DLN6896	FRU: PA UHF R2	$2,221.00
DLN6891	FRU: PA UHF R1	$1,200.00
DLN6897	FRU: PA VHF	$2,416.00
DLN6935A	FRU: 150W PA 800MHZ	$12,500.00
DLN6883	FRU: XCVR 7/800 MHZ V2 W/OPT CARD	$4,000.00
DLN6886	FRU: XCVR UHF R2 V2 W/OPTION CARD	$4,000.00
DLN6887	FRU: XCVR UHF R2 V2 PWR EFF OPT CRD	$4,000.00
DLN6889	FRU: XCVR UHF R1 V2 W/OPTION CARD	$4,000.00
DLN6890	FRU: XCVR UHF R1 V2 PWR EFF OPT CRD	$4,000.00
DLN6893	FRU: XCVR VHF V2 W/OPTION CARD	$4,000.00
DLN6781	FRU POWER SUPPLY	$2,200.00
DLN6793	FRU: PWR EFF POWER SUPPLY AC/48VDC	$1,425.00
DLN6795	FRU: T2-2R RECEIVER MUTE	$2,000.00
DLN6796	FRU: T3-3R RECEIVE MUTE	$2,000.00
DLN6797	FRU: T4-4R RECEIVER MUTE	$2,000.00
DLN6798	FRU: RCVR SOFT NO SPLITTER	$400.00
DLN6799	FRU: T1-2R W/TALKAROUND	$1,200.00
DLN6800	FRU: T2-2R DUPLXR &TRPL RELAY	$4,000.00
DLN6821	FRU: GTR ANALOG 4W E&M SIMULCST KIT	$250.00
DLN6898	FRU: FAN MODULE	$206.00
DLN6455	CONFIGURATION/SERVICE SOFTWARE	$25.00
DLN6836	FRU: GTR 136-146MHz EXT DUAL CIRCULATOR KIT	$1,500.00
DLN6837	FRU: GTR 144-160MHz EXT DUAL CIRCULATOR KIT	$1,500.00
DLN6838	FRU: GTR 158-174MHz EXT DUAL CIRCULATOR KIT	$1,500.00
DLN6839	FRU: GTR 380-403MHz EXT DUAL CIRCULATOR KIT	$1,500.00
DLN6840	FRU: GTR 403-470MHz EXT DUAL CIRCULATOR KIT	$1,500.00
DLN6841	FRU: GTR 470-512MHz EXT DUAL CIRCULATOR KIT	$1,500.00
DLN6842	FRU: GTR 764-870MHz EXT DUAL CIRCULATOR KIT	$1,500.00

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SUGGESTED RETAIL

MTR3000 SATELLITE RECEIVER
VHF & UHF, 800/900 MHz
MODELS & OPTIONS

GENERAL INFORMATION:

- MTR3000 Satellite Receiver operates in Analog Conventional operation only
- MTR3000 Satellite Receiver can also be used as Digital Voting Satellite Receiver
- RoHS (Restriction of Hazardous Substances) Compliant
- Come standard with a basic install/ service and user manual
- Come standard with a wireline board
- Switching power supply functions for over a wide range of voltages and frequencies
- NEW IMPROVED WARRANTY - TWO Year Motorola Standard Warranty

**Please refer to Motorola Online Resource Center for further product level information and technical configuration/Ordering requirements
MTR3000 Base Station/Repeater/ Satellite Receiver Product Planner & Sales Ordering Guide

ORDERING REQUIREMENTS:

1. Order a quantity of one T7713A per line item.
2. You must enter the exact customer frequencies at the time order is placed. Frequency selection option also mandatory
3. Customer Programming Software (CPS) is required to program.
4. Preselector is optional for the MTR3000 Satellite Receiver - Refer to the Product Planner/Sales Ordering Guide for Further rules.
5. AC cable comes standard. The DC cable is optional.

DUE TO THE COMPLEX NATURE OF CERTAIN ORDERABLE OPTION CONFIGURATIONS WE STRONGLY RECOMMEND REVIEW OF THE PRODUCT PLANNER AND SALES & ORDERING GUIDE

MODEL	DESCRIPTION	MSRP
T7713	MTR3000 RECEIVER	$1,400.00

MODEL	DESCRIPTION	MSRP
• **SELECT FREQUENCY OPTION:**		
XA00045AA	ADD: UHF (403-470 MHz)	$3,400.00
XA00046AA	ADD: UHF (470-524MHz)	$3,400.00
XA00047AA	ADD: VHF (136-174MHZ)	$3,400.00
XA00048AA	ADD: 800MHz (806-870)	$3,600.00
XA00049AA	ADD: 900MHz (896-941)	$3,600.00

MODEL	DESCRIPTION	MSRP
Software:		
RVN5115	Portable, Mobile, and Repeater Customer Programming Software (CPS) Package - Software package includes CPS, Air Tracer, Tuner, Repeater Diagnostic Control, and the MOTOTRBO System Planner. 3 Year Subscription Package Software is compatible with Windows XP & Windows Vista (Home and Professional versions) and Windows 7; support for Windows 2000 ended 6/30/09. ***Note: Software requires a license agreement and is not intended for resale.***	$265.00
DDN9957	HI-SPEED USB CABLE 6FT (TYPE A -B)	$20.00
Power Cable:		
CA01520AA	ADD: POWER CABLE, DC	$25.00
Misc:		
X269AC	ENH: SPECTRA TAC	$150.00
X699BA	ADD: MTR3000 FACTORY TEST REPORT	N/C
Peripherals:		
X265UL	ADD: PRESELECTOR, UHF (380-435 MHZ)	$500.00
X265UM	ADD: PRESELECTOR, UHF (435-470 MHZ)	$500.00
X265UH	ADD: PRESELECTOR, UHF (470-524 MHZ)	$500.00
X265VL	ADD: PRESELECTOR, VHF (136- 154 MHZ)	$500.00
X265VH	ADD: PRESELECTOR, VHF (150-174MHZ)	$500.00

Kits\ & Accessories: MTR3000 Field Replaceable Units (FRUs)

All Field Replacement Units (FRUs) are available through Customer Care and Service Division (RPSD) 1-800-927-2744.

FRU MTR3000 Satellite Receivers:		
DLN6776	FRU: MTR3000 RECEIVER EXCITER FRU	$100.00
DLN6777	FRU: MTR3000 RECEIVER PA FRU	$100.00
SPEAKERS/TEST CABLE:		
HSN1006	EXTERNAL SPEAKER	$104.00
0185180U01	CABLE FOR EXTERNAL SPEAKER	$18.25
30009493001	RECEIVER AUDIO TEST CABLE	$65.25

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SUGGESTED RETAIL

VXR-7000 DESKTOP REPEATER
VERTEX STANDARD
VHF & UHF

VXR-7000 Desktop Repeater Features:
- 12.5/25 kHz Switchable Channel Spacing
- 16 Channels
- Output Power 10~50 Watts Adjustable
- Programmable Busy Channel Lock Out
- Programmable Busy Timer Lock Out
- CWID
- CTCSS / DCS Codes
- Automatic DC Power Supply Back Up
- 100% Continuous Duty Cycle

The available channel stepping frequency ranges for the VXR-7000 are 2.5kHz, 5kHz, 6.25kHz, 10kHz, and 12.5kHz

Repeater Package Items

Untuned duplexers for the VXR-7000 are available.
The duplexers must be order separately.
The desktop microphone must be ordered separately.
Repeater CPS is downloadable from MOL.

Warranty Policy

Repeater warranty is 3 Years. For warranty repair, repeater must be sent to Vertex Standard directly. Please contact Vertex Standard at 1-800-2Vertex. Vertex Accessory warranty is 1 year. For warranty, please contact Motorola Customer Service at 1-800-927-2744 for a warranty replacement order.

Service Repair Policy

VXR-7000 repeaters are supported by Motorola's 45 Day DOA Policy. For 45 day DOA radios, please contact Motorola's Customer Service at 1-800-927-2744. After 45 days, please contact Vertex Standard directly for all repair services at 1-800-2Vertex for the required repair request form. All service charges will require credit card payment.

Return Policy

These products are supported by the Motorola Return Policy. All product must be returned with factory box, packing materials, owner's manual & warranty cards. Contact Motorola Customer Service at 1-800-927-2744 for return

Post Sales Support

For post-sales technical inquiries and support needs, please contact Vertex Standard directly at 1-800-2Vertex.

MODEL	DESCRIPTION	MSRP
Options: TO COMPLETE AN ORDER YOU MUST MAKE ONE (1) CHOICE FOR STEP 1		
	STEP 1:	
Select One (1) of the following Desktop Repeater Models		
A13670010	VXR-7000VC PKG-1; 50W 150-174 Mhz, 16 Ch	$1,650.00
A13680014	VXR-7000UD PKG-1; 50W 450-480 Mhz, 16 Ch	$1,650.00
	STEP 2:	
Select microphone option:		
AAF13X001	MD-12A8J Mobile Desktop Microphone	$102.00
	STEP 3: **(Optional)**	
All duplexers have female type "N" connectors.		
Select One (1) Untuned Duplexer		
XUFIP0002	Untuned VHF Duplexer for VXR-7000, 148-160 MHz	$410.00
XUFIP0001	Untuned UHF Duplexer for VXR-7000, 440-480 MHz	$410.00
	STEP 4: **(Optional/Required - See Below)**	
Select cable option if duplexer was ordered above.		
AAA21X001	CT-68 Duplexer Installation Cable Kit	$63.00

MODEL	DESCRIPTION	MSRP
General Accessories:		
AAF13X001	MD-12A8J Mobile Desktop Microphone	$102.00
AAA21X001	CT-68 Duplexer Installation Cable Kit	$63.00
XUFIP0002	Untuned VHF Duplexer for VXR-7000, 148-160 MHz	$410.00
XUFIP0001	Untuned UHF Duplexer for VXR-7000, 440-480 MHz	$410.00
A06420002	VPL-1 Programming Cable	$87.00

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SUGGESTED RETAIL

MC1000™, MC2000™ & MC2500™
DESKTOP CONTROLLERS
Models

All MC1000, MC2000 and MC2500 Models Include:
- 4 Frequency Station Control
- Push-to-Talk Handset
- 2 or 4 Wire
- LOTL/LOBL
- Black Color
- Volume Control / Transmit LED
- Monitor Switch
- 120V AC - 60 Hz Power Supply
- Supervisory Takeover or Line Select
- Operator Cross Mute
- Intercom
- LTR® Compatible
- Service Manual
- One Year Warranty

The MC2000 is going EOL with a last order date of September 30, 2014.

MC2500 Only Additional Features:
- 4 Base Station Control - Capable of controlling 4 Tone channels or 3 Tone channels and 1 DC channel.
- Also capable of E & M control on all channels. Use of a Tone or DC Remote Adapter is required when connected to a mobile in a tray.
- Connector for Unselect Speaker
- Individual Volume Control
- Dedicated Logging Recorder Output
- Radio Patch
- Multi-Select
- Multi-Tasking
- All Mute

MC2000/MC2500 Additional Features:
- 18 Programmable Buttons
- 2 Line x 20 Character Backlit Display
- Multi-Frequency Capability - up to 16 frequencies on Tone
- 110V/220V AC - 50/60 Hz Power Supply
- MDC Features:
  - PTT Unit ID (Encode/Decode)
  - Voice Selective Call (Encode/Decode)
  - Call Alert/Short Call Alert (Encode/Decode)
  - Status Message (Decode)
  - Radio Enable/Disable (Encode)
  - Radio Check (Encode)
  - Emergency Alarm (Decode)
- Recent User Stack - Last nine records are stored for review at any time.
- RS232 Port - Allows RSS programming via computer or the logging of MDC1200 inbound/ outbound Serial Printer Port activity for permanent record keeping on a serial printer.
- Paging Encode '- Allows you to selectively call a pager, portable, or mobile unit and eliminate the need to purchase a stand alone encoder. The following schemes are supported: QC II, 2 Tone, 5 Tone, 6 Tone, Digital Dial, Reach 1+1, GE 99, NEC 5 & 6, DTMF or Custom A and B tones.
- Aux I/O's
- Securenet Coded/Clear Operation - Supports positive mode control (Tone)

Notes:
1. Intercom - Allows communication between desksets without accessing the radio frequency
2. Up to 10 remotes can be used in parallel.
3. MC Series remotes are not compatible with 900 MHz MaxTrac Mobiles.
4. MC2000 and MC2500 units require RSS programming software.
5. MC2500 unselect speaker port supports a passive speaker only.
6. For unexpected out-of-box failures or quality issues, the MC Series and MC3000 must be returned for warranty repair. Please refer to the user's manual. Units will be replaced if they are sent in a total of 3 times and continue to exhibit the same problem.
7. For L3276 & L3277, radio interface cable not included. Must be ordered separately.

DC and Tone Remote Control Models Only:
- For DC and Tone Remote Control: If base is not remote capable, a Remote Adapter is required (see L3276 & L3277).
- The L3213 Desksets support channel steering between 4 talkgroups over conventional or LTR® Trunking Systems.
- The L3216 and L3217 Desksets support channel steering between 15 talkgroups over conventional or LTR® Trunking Systems.

MODEL	DESCRIPTION	MSRP
L3213	MC1000 Tone Remote Control - 4 Frequency Maximum, 2-Wire or 4-Wire	$545.00
L3216	MC2000 Tone Remote Control - 16 Frequency Maximum, 2-Wire or 4-Wire, Parallel Status Updating	$1,300.00
L3217	MC2500 Multi-Channel Remote Control	$2,482.00

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SUGGESTED RETAIL

MC1000™, MC2000™ & MC2500™
DESKTOP CONTROLLERS
ACCESSORIES

MODEL	DESCRIPTION	MSRP
Tone & DC Remote Adapters - includes AC Power Supply (DDN7066) and Install/Service Manual:		
L3276	Tone Remote Adapter	$695.00
L3277	DC Remote Adapter	$552.00
General Accessories:		
HLN9457	Hardware Kit for use with the Expanded Accessory Connector (includes 16 connector pins, five (5) 8" wires with pins attached and an extra housing)	$6.95
Extended Local Control Accessories (for use with L3211 and L3214):		
DDN6337	Junction Box (order appropriate cable below) For connecting up to 6 local control desksets to the station.	$399.00
Radio Interface Cables (for use with DDN6337, L3276 and L3277):		
DDN6338	Radio Interface Cable (10 Ft.) for use with MaxTrac (16 pin accessory connector required), SM120™, M1225™, CDM750™, CDM1250™, CDM1550™ & CDM1550•LS+™	$72.00
DDN6340	Generic Radio Cable (10 Ft.) - unterminated, bare leads (can also be used with L3217)	$50.00
Field Install Kits:		
DDN6481	Punch Block with Spark Gap (recommended)	$405.00
DDN6516	Headset Jackbox - adds headset capacity (See MC3000 pages for compatible headsets)	$110.00
DDN6668	Single Footswitch	$94.00
DDN6341	110VAC Transformer for MC1000 models	$69.00
DDN6342	110/220VAC - 50/60 Hz Power Supply for MC2000 and MC3000 models	$219.00
DDN6339	110/220VAC - 50/60 Hz Power Supply for MC2500 models	$198.00
DDN7066	110/220VAC - 50/60 Hz Power Supply for L3276 & L3277 Remote Adapters	$195.00
Programming (MC2000 and MC2500 Models Only):		
RVN4178	Radio Service Software (includes CD-ROM)	$265.00
DDN6367	Radio Service Software Cable AT (DB9)	$35.00

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SUGGESTED RETAIL

MIP™ 5000 VoIP RADIO CONSOLE

*** MIP 5000 Release 4.2 Now Shipping***

MIP 500 Release 4.2 New Features:
- Support for XPR 5550 MOTOTRBO Mobile
- 48 Channel Support
- Microsoft Windows 8.1 64-Bit
- Multi-Touch Monitor Support
- Dual Channel IRR Support

MIP 5000 Console General Information:

The MIP 5000 VoIP Radio console is designed to provide customers an affordable solution to transmit dispatch quality voice over their existing Multicast enabled Ethernet network, The MIP 5000 radio console connects up to 100 users with flexible licensing that is available with 1, 4, 8, 12, 24, and 48 channel software options. In addition, up to 128 radio resources can be connected to the network and configured in the Console System Database Manager (CSDM). These configuration files can be saved on each operator position to allow the dispatcher to access and control different combinations of radio resources (up to 48 at a time).

MIP 5000 consists of **Gateways** which connect the radios to the **Network** and Operator Position components including: **MIP 5000 application software, Personal Computer (PC),** and **Audio accessories**

Gateways

There are 4 types of gateways available in a MIP 5000 system to interface to radios: Local, Tone, Digital, and MOTOTRBO. Gateways have a one to one relationship to radios. One gateway is required for each radio controlled.

Local Gateway L3482 controls radios, typically Mobiles in a Tray, via Microphone and Speaker connection and will support up to 16 frequency select (depending on radio capability).

Radio Interface Cables:
- Prewired cable for CDM Family: DDN6338
- Prewired cable for MCS2000: DDN6699
- Generic radio cable for use with XTL family: DDN6340 (Requires field install of XTL accessory connector)
- Map universal cable for use with MOTOTRBO/XPR family: PMKN4018 (Requires field install of DB25 for local gateway)

Tone Gateway L3483 controls base stations or repeaters with tone control signaling which will support up to 16 frequency select (depending on radio capability) via 600 Ohm lease lines. In addition, the tone gateway will also support E&M signaling.

DIU With a tone gateway connected to the 4 wire interface on a DIU, the MIP 5000 can talk/listen, change frequency and, select coded/clear. However, MIP 5000 does not support the ACIM link functionality of the DIU.

Digital Gateway L3484 acts as a virtual control head for specific Motorola radios or Consolettes via the SB9600 protocol. MIP 5000 will display the Alias ID if the individual Subscriber is configured to send it. MIP 5000 will provide the dispatcher access to the same number of frequencies the radio is capable of.

Mobiles supported are:
- APX 7500 Mobile in a tray (05 Control Head, Remote Mount)
- MCS2000 Model III
- Spectra/Spectra Plus Consolette W9
- ASTRO XTL5000 Consolette W9
- CDM1550 LS/LS+ - Requires Remote Kit (RLN4802) and Remote Cable Kit (RKN4077)

MIP 5000 Release	APX 7500 Firmware Version
R04.01.00	R09.00.00 or later
R04.01.01	R09.00.00 or later
R04.02.00	R10.00.00 or later

MOTOTRBO Gateway L3598 acts as a virtual control head for the MOTOTRBO XPR4550 control station via the XCMP protocol. MIP5000 will display the Alias ID when in analog or TRBO digital mode. MIP5000 will provide the dispatcher access to the same number of frequencies the radio is capable of. MOTOTRBO system types supported are:
- Conventional
- IP Site Connect
- Linked Capacity Plus
- Capacity Plus
- Connect Plus - Requires Connect Plus System Release 1.4b

MIP 5000 Release	XPR 4550 Firmware Version	XPR 5550 Firmware Version
R03.00.00	1.7.x	N/A
R03.00.01	1.7.x	N/A
R04.00.00	1.8.x	N/A
R04.01.00	1.9.x	N/A
R04.01.01	1.11.x	N/A
R04.02.00	1.12.x	R02.30.01

Network

It is highly recommended that customers intending to use MIP 5000 in Public Safety situations use a dedicated network for dispatching. For non public safety situations, a MIP 5000 can be placed on an existing customer network. Network must support multicast addressing and be QoS enabled. For complete network requirements, see Specification Sheet on MOL or EYES.

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MIP™ 5000 VoIP RADIO CONSOLE
Models

Personal Computer (PC)

It is highly recommended that customers intending to use MIP 5000 in Public Safety situations purchase the TT2538 Motorola certified HP desktop computer. If not purchasing Motorola computers, see Specification Sheet on MOL for Recommended Minimum Computer Specifications. R04.02.00 supports Windows 7 Professional Service Pack 1 (32or 64 bit) and Windows 8.1 Professional (64-Bit). For Information Assurance Customers, the TT2538 is still the only certified solution.

ORDERING REQUIREMENTS
*** You must also order a DDN9867 MOTOTRBO Direct Connect Cable to connect the MOTOTRBO Gateway to the XPR 4550 or XPR 5550 Mobile ***

The MIP 5000 gateways do not ship with punch blocks or cables for connecting to base stations or radios. These must be ordered separately or provided by the customer. See the Accessories section below for cables that can be used for connecting to various radios.

Headset Jackbox

Every MIP 5000 operator position requires either a Basic or an Enhanced headset Jackbox. The Jackbox is needed for all standard (non USB) accessories. Each position requires a minimum of 1 and can support a maximum of 3 of any combination of Jackboxes. TT05515AA is the option for the Basic Headset Jackbox and TT05522AA is the option for the Enhanced headset Jackbox.

A headset(s) may be used with the MIP 5000 Console. Each headset must be connected to a MIP 5000 USB Basic or Enhanced Jackbox. A headset consists of two parts, a base and a top. A choice of two bases (CDN6281 and CDN6282) and several tops is provided. The MIP 5000 supports a maximum of two headsets per operator position.

Upgrades

Upgrades to R04.02.00 are available at no charge. Labor for upgrade installation is not reimbursable. To order contact System Support Center at 800-221-7144, option 4 on the call tree and request that a software case be opened.

Existing System Expansion

All new orders for Software and Gateways will ship with the latest release software – R04.02.00.
Adding Gateways: If adding gateways onto an existing R04.01.01 system or earlier, gateways will automatically downgrade during the installation process to match the software release running in the system.

Adding Operator Positions: If adding new operator positions to an existing R04.01.01 system or earlier, you will be required to upgrade the entire system (all Operator positions, CSDM and gateways) to R04.02.00. All operator positions and gateways in a MIP 5000 system must run the same version of software.

Instant Recall Recorder (IRR)

The Instant Recall Recorder (IRR) software with MIP 5000 allows users to record audio digitally on the MIP 5000 Operator position. Operator TX audio, Select and Unselect RX audio, Telephone Call Director Audio or any combination may be recorded.

If PC is...	Order	Includes:
...TT2538A MIP 5000 Certified PC	DDN1612	IRR Software & License, Soundcard, and PC Speakers
...Customer PC w/o Speakers	DDN1612	IRR Software & License, Soundcard, and PC Speakers
...Customer PC with Speakers	DDN1611 & DDN1118	IRR Software & License, Soundcard

Note: MIP 5000 with IRR on a laptop is not a supported configuration Link to price pages; Dual Instant Recall Recorder

Pre-Install Support

Motorola now offers MIP 5000 Installers an exclusive conference call with a knowledgeable Technical Support consultant prior to going on site. If you previously have not installed a MIP 5000 system, we highly recommend this call at no charge to you to ensure a successful install. Motorola will cover the first 30 Minutes of the call, any additional support beyond the 30 Minutes will follow the standard MIP 5000 support process. Call 1-800-221-7144 option 2,3,3.

Network Equipment

Model Number	Description	MSRP
CLN1836	HP Switch 2610-24	$2,250.00

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MIP™ 5000 VoIP RADIO CONSOLE
Models & Accessories

Model Number	Description	MSRP
	Gateways:	
L3482AC	MIP5000 VoIP Local Gateway PS California Compliant - Provides one MIP 5000 Local Gateway. Each gateway is capable of supporting one local control radio. Punch blocks and cabling for connecting to the radio are not included in the L3482AC. An Ethernet cable (not included) is also required for each L3482AC	$798.00
L3483AC	MIP 5000 VoIP Tone Gateway PS California Compliant - Provides one MIP 5000 Tone Gateway. Each gateway is capable of supporting one tone remote controlled base station. Punch blocks and cabling for connecting to the station are not included in the L3483AC. An Ethernet cable (not included) is also required for each L3483AC.	$798.00
L3484AC	MIP 5000 VoIP Digital Gateway PS California Compliant - Provides one MIP 5000 Digital Gateway. Each gateway is capable of supporting one SB9600-capable radio. Punch blocks and cabling for connecting to the radio are not included in the L3484AC. An Ethernet cable (not included) is also required for each L3484AC	$798.00
L3598AC	MIP5000 VoIP MOTOTRBO Gateway - Provides one MIP 5000 MOTOTRBO Gateway. Each gateway is capable of supporting one XPR4550 or XPR 5550 radio. Punch blocks and cabling for connecting to the radio are not included in the L3598AC. An Ethernet cable (not included) is also required for each L3598AC.	$798.00
DDN8671	15 Ft Null Modem Cable DB9 F/F 1 cable required per system to configure the gateway	$13.00
DDN8672AC	Spare Power Supply for MIP 5000 Gateway w/ Power Cable California Compliant	$146.00
	MIP 5000 Software Channels:	
L3485	MIP5000 VoIP Dispatch SW 1 Ch. - Provides the software application and licenses for one MIP 5000 1 Ch. Dispatch console. Allows a dispatcher to access and control one MIP 5000 Local, Tone, Digital, or MOTOTRBO Gateway. The PC, microphone, speakers and headset are not included and must be provided separately.	$1,500.00
L3486	MIP5000 VoIP Dispatch SW 4 Ch. - Provides the software application and licenses for one MIP 5000 4 Ch. Dispatch console. Allows a dispatcher to access and control up to four MIP 5000 Local, Tone, Digital, or MOTOTRBO Gateways.The PC, microphone, speakers and headset are not included and must be provided separately.	$2,500.00
L3487	MIP5000 VoIP Dispatch SW 8 Ch. - Provides the software application and licenses for one MIP 5000 8 Ch. Dispatch console. Allows a dispatcher to access and control up to eight MIP 5000 Local, Tone, Digital, or MOTOTRBO Gateways.The PC, microphone, speakers and headset are not included and must be provided separately.	$6,500.00
L3499	MIP5000 VoIP Dispatch SW 12 Ch. - Provides the software application and license for one MIP 5000 12 Ch Dispatch console. Allows a dispatcher to access and control up to 12 MIP 5000 Local, Tone,Digital, or MOTOTRBO Gateways.The PC, microphone, speakers and headset are not included and must be provided separately.	$10,500.00
L3567	MIP5000 VoIP Dispatch SW 24 Ch. - Provides the software application and USB Hasp Key for one MIP5000 24-Channel dispatch console. Allows a dispatcher to access and control up to 24 MIP5000 Local, Tone, Digital, or MOTOTRBO Gateways. The PC, microphone, speakers, and headset are not included and must be provided separately.	$15,500.00
L3630	MIP5000 VoIP Dispatch SW 48 Ch. - Provides the software application and USB Hasp Key for one MIP5000 48-Channel dispatch console. Allows a dispatcher to access and control up to 48 MIP5000 Local, Tone, Digital, or MOTOTRBO Gateways. The PC, microphone, speakers, and headset are not included and must be provided separately.	$25,000.00
	MIP 5000 Options for Software:	
TT05515	MIP5000 Basic Model USB Headset Jackbox	$500.00
TT05522	MIP5000 Enhanced Model USB Headset Jackbox	$575.00

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MIP™ 5000 VoIP RADIO CONSOLE
Models & Accessories

Model Number	Description	MSRP
	MIP 5000 Software Channels:	
TT2194	Expansion software from 12 channel to 24 channel capability	$5,500.00
TT2193	Expansion software from 8 channel to 24 channel capability	$9,500.00
TT2192	Expansion software from 4 channel to 12 channel capability	$8,500.00
TT2191	Expansion software from 4 channel to 24 channel capability	$13,000.00
TT2225	Expansion software from 8 channel to 12 channel capability	$4,500.00
TT2745	Expansion software from 4 channel to 48 channel capability	$23,000.00
TT2746	Expansion software from 8 channel to 48 channel capability	$19,000.00
TT2747	Expansion software from 12 channel to 48 channel capability	$15,000.00
TT2748	Expansion software from 24 channel to 48 channel capability	$10,000.00

Note: Orders place for Expansion Software must be accompanied by telephone call to System Support Center (SSC) to open an entitlement case. Before your MIP 5000 Expansion Software order can ship you must call Support Center at 800-221-7144, option 4on the call tree and request a software case be opened. Be prepared to provide the Factory Order (FO) # and the Serial number of currently installed software as well as the new FO# for Expansion SW.

	Demo Equipment:	
L3544	MIP5000 4 Ch. Demo Software The 4 channel MIP 5000 Demo Software provides software to dealers at a significant discount. This discount is made available to dealers who want to set up a working MIP 5000 system for Customer demo purposes. The offer is limited by the number of dealership offices To complete the demo system, the following components need to be ordered: 1) Up to 4 MIP 5000 Gateways (L3482 local , L3483 tone, L3484 digital, L3598 MOTOTRBO) 2) DDN8671 Null Modem cable for programming the gateway. 3) DDN9492 USB Headset Jackbox, 4) B1914 Desktop Gooseneck Microphone. 5) Mobile radio with radio interface cables to connect the gateway to the radio 6) A desktop or laptop computer meeting MIP 5000 specifications 7) a set of PC Speakers 8) Subscriber to demonstrate RX and TX audio	$750.00
L3615	MIP 5000 1 Channel MOTOTRBO Demo Kit Kit Includes: 1) 1 Channel MIP 5000 Software 2) 1 MIP 5000 MOTOTRBO Gateway 3) 1 MIP 5000 MOTOTRBO Direct Connect Cable Limited to 1 Kit Per Dealer Site Location	$750.00
	Computers:	
TT2538	Z420 Low Tier Workstation with Windows 7 Pro 64 Bit SP1	$2,550.00
DDN1612	SW Based IRR USB HASP with License, Sound Card, and Speakers for Windows 7. Kit includes software based Instant Recall Recorder (IRR) CD, USB HASP protection key, Sound Blaster XFI Xtreme sound, and a Set of PC speakers . A set of PC speakers are included to facilitate the playback audio from the telephone and radio lines.	$2,935.00
CDN6673	Set of 2 PC Speakers	$46.00
DS017BLK	17 INCH NON-TOUCH MONITOR, BLACK	$1,180.00
DS019BLK	19" LCD, Black, No - Touch	$1,520.00
DS017BLKTS	17" LCD, Black, with Touch	$2,134.00
	Audio:	
DDN9492	MIP5000 Basic Model USB Headset Jackbox Supports 1 Plantronics two prong headset base and quick disconnect top, 1 footswitch BLN6732 and 1 gooseneck Microphone B1914	$500.00
DDN9493	MIP5000 Enhanced Model USB Headset Jackbox Supports 1 Plantronics two prong headset base and quick disconnect top, 1 footswitch BLN6732 and 1 gooseneck Microphone B1914, also provides port for Call Director, logging Recorder or External Pager port.	$575.00
B1914	MCC Series Desktop Gooseneck Microphone Provides one desktop style microphone. Includes transmit and monitor buttons, an 18" gooseneck shaft and a 10 foot cable. Compatible for use near CRT monitors.	$250.00
BLN6732	Foot, Switch Tradition	$106.00

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SUGGESTED RETAIL

MIP™ 5000 VolP RADIO CONSOLE

Accessories

Model Number	Description	MSRP
	MOTOTRBO Gateway Radio Interface Cable:	
DDN9867	MOTOTRBO XPR4550 and XPR 5550 Direct Connect Cable	$159.00
	Digital GW Radio Interface Cables:	
DDN1463	APX 7500 Mobile Direct Connect Cable	$230.00
DDN8350	MCS2000 III Direct Connect Cable	$200.00
DDN8351	Consolette W9 Direct Connect Cable	$100.00
DDN8352	CDM1550 Series Direct Connect Cable	$100.00
	Local GW Radio Interface Cables:	
DDN6338	Radio Interface Cable 4 Use with MAXTRAC, M1225, SM50, SM120, CDM1550 - For connecting MAXTRAC, M1225, SM50, SM120, CDM750, CDM1250, and CDM1550 family radios with Local Junction Box (DDN6337) and TRC/DC Remote Adapters (L3276/L3277)	$72.00
DDN6340	Generic Radio Cable with Unterminated Bare Leads - For use with Local Junction Box (DDN6337) and TRC/DC Remote Adapters (L3276/L3277).	$50.00
DDN6699	Radio Interface Cable For the MCS2000	$138.00
	Headset Tops: (pick at least 1 headset top)	
RMN5077	Supraplus Single Muff Headset	$110.00
RMN5078	Supraplus NC Single Muff Headset	$149.00
RMN5079	Supraplus Dual Muff Headset	$117.00
RMN5080	Supraplus NC Dual Muff Headset	$139.00
	Headset Bases: (1 per operator position)	
RLN6098	HDST Module Base w/ PTT, 15' Cbl	$210.00
RLN6099	HDST Module Base w/ PTT, 25' Cbl	$242.00
	RackMount Kit:	
DDN8900	MIP5000 Rackmount Kit (Holds maximum of 2 gateways)	$225.00
	Information Assurance: (to be used with TT2538 computer)	
TT2134	MIP5000 Information Assurance Transparent Hardening Kit CD	$50.00
TT2135	MIP5000 Information Assurance Fully Hardened Kit CD	$50.00

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SUGGESTED RETAIL

MONITORING & CONTROL NETWORK (MCN) FOR MIP 5000 CONSOLE

The MIP 5000 console system now supports Auxiliary I/Os via CTI's Monitoring ControlNetwork Remote Comparator Display (MCN RCD) Client Server Software. This software provides real-time monitoring and control for a wide range of devices including doors,alarms, light switches, and other general purpose Auxiliary I/O applications. In addition,the MCN RCD system supports comparator/voting displays at the MIP 5000 console operator position. The MCN RCD Client Server Software is an IP based solution and can run on the same network as the MIP 5000 console. The MCN RCD system consists of two parts: The MCN RCD Server Software with HIB-IP Module and the specific interface module for the application. The interface module(s) can be General Purpose I/Os, Comparator module, or a combination of the two. The paired solution between the MIP 5000 console and the MCN RCD Client Server Software can support up to 192 inputs and 128 outputs.

Ordering Requirements:

STEP 1:

Order the MCN RCD Software with HIB-IP, **DDN1388** – this will allow up to 4 MIP 5000 operator positions (clients) to share the I/O module status. If more than 4 operator positions are required, than the MCN SW Lic Opt Client Expansion for 4

STEP 2:

Order 1 power supply **CDN6116** with every HIB-IP Module.

STEP 3:

Order the appropriate modules for the application. A maximum of 16 modules can be supported per HIB-IP.

- For General Purpose Aux I/Os, order **DDN1385 (GPIO)**. Each DDN1385A can control 12 inputs and 8 outputs.
- For interfacing to ASTRO-TAC Comparators, order **CDN6119 (AIB).**
- For interfacing to SPECTRA-TAC Comparator, order **CDN6121 (CIB).**

STEP 4:

Order 1 power supply, **CDN6116**, for every 4 modules ordered in Step 3.

- Example 1: If you order 2 DDN1385 and 2 CDN6119, then order 1 CDN6116.
- Example 2: If you order 3 DDN1385 and 2 CDN6121, then order 2 CDN6116.

STEP 5:

Order the same number of network cables as the Quantity of modules ordered in Step 3. The following Network cable lengths are available:

- CABLE ASSY NETWORK 9 INCHES, **CDN6123**
- CABLE ASSY NETWORK 3 FT, **CDN6124**
- CABLE ASSY NETWORK 10 FT, **CDN6125**
- CABLE ASSY NETWORK 25 FT, **CDN6126**
- CABLE ASSY NETWORK 100 FT, **CDN6127**

Note: If rack mounting, the 9 inch cable should be used from module to module. To connect between rackmount shelves, the 3 FT cable should be used.

STEP 6:

Order 2 Network Terminator's, **CDN6115**, for every HIB (DDN1388) ordered in Step 1.

STEP 7:

Order appropriate cabling for modules:

For each GPIO and CIB module ordered in Step 3, order:

- 1 PUNCH BLOCK DUAL 25 PAIR, **CDN6118**
- 1 CABLE ASSY 25 PR M-NONE 25FT, **CDN6135**

And 1 of the cables below:

- CBL ASSY 25 PR MALE-MALE 10 FT, **CDN6129**

OR

- CBL ASSY 25 PR MALE-MALE 25 FT, **CDN6130**

For each AIB module ordered in Step 3, order CBL ASSY AIB COMPARATOR 10 FT, **CDN6131**

Order 1 CABLE KIT HIB PC AT/XT 6 FT, **DDN6132** for every system

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MONITORING & CONTROL NETWORK (MCN) FOR MIP 5000 CONSOLE

SUGGESTED RETAIL

Ordering Requirements (Continued):

STEP 8:

It's recommended to order the appropriate manual for modules ordered in Step 1 and Step 3, manuals are not included with Modules.

Manuals for Modules in Step 1 – Both manuals are needed for DDN1388
- HIB HARDWARE GUIDE, **CDN6110**
- MCN SERVER SOFTWARE MANUAL **DDN1402**

Manuals for Modules in Step 3
- GPIO HARDWARE GUIDE, **DDN1386**
- AIB HARDWARE GUIDE, **CDN6107**
- CIB HARDWARE GUIDE, **CDN6109**

STEP 9: **(Optional)**

Order the appropriate quantity of rackmount shelves for modules ordered in Step 1 and Step 3.

- **DDN1387** is available to rackmount the *MCN RCD HIB MODULE.* Each rackmount will support 1 DDN1388 (Step 1) and two additional GPIO, AIB or CIB modules (Step 3).

- Additional rackmount shelves for the GPIO, AIB or CIB modules ordered in Step 3, can be purchased with part number **CDN6112**. Each CDN6112 can support up to 4 modules.

MODEL NUMBER	DESCRIPTION	MSRP
MCN Modules		
DDN1388	MCN RCD Software and HIB-IP Module	$7,000.00
DDN1385	MCN GPIO-1208C Input/Output Module	$1,075.00
CDN6119	AIB ASTROTAC Interface Module	$1,900.00
CDN6121	CIB Comparator Interface Module	$775.00
Software Expansion		
DDN1295	MCN SW LIC OPT Client Expansion for 4 Additional Clients	$2,765.00
Power Supply		
CDN6116	Power Supply MCN120 VAC	$84.00
Network Cables and Terminators		
CDN6123	Cable Accessory Network, 9 IN	$21.00
CDN6124	Cable Accessory Network, 3 FT	$21.00
CDN6125	Cable Accessory Network, 10 FT	$21.00
CDN6126	Cable Accessory Network, 25 FT	$38.00
CDN6127	Cable Accessory Network, 100 FT	$92.00
CDN6115	Network Terminator (Standard 78K Systems)	$10.00
Parallel Input/Output Cables		
CDN6129	Cable Accessory, 25 PR Male-Male, 10 FT	$36.00
CDN6130	Cable Accessory, 25 PR Male-Male, 25 FT	$55.00
Serial Cables		
CDN6132	Cable Kit HIB PC AT/XT, 6 FT	$30.00
CDN6131	Cable Accessory AIB Comparator, 10 FT	$55.00
Manuals		
CDN6110	HIB Hardware Guide	$20.00
DDN1402	MCN Server Software Manual	$28.00
DDN1386	GPIO Hardware Guide	$20.00
CDN6107	AIB Hardware Guide	$20.00
CDN6109	CIB Hardware Guide	$20.00
Rack Mounting		
DDN1387	MCN Accessory Rack Mount Kit Dual A + B	$75.00
CDN6112	Rack Mount Quad Size A	$78.00